

Predictability Horizons: Part II

Recent Examples from 2013-2014

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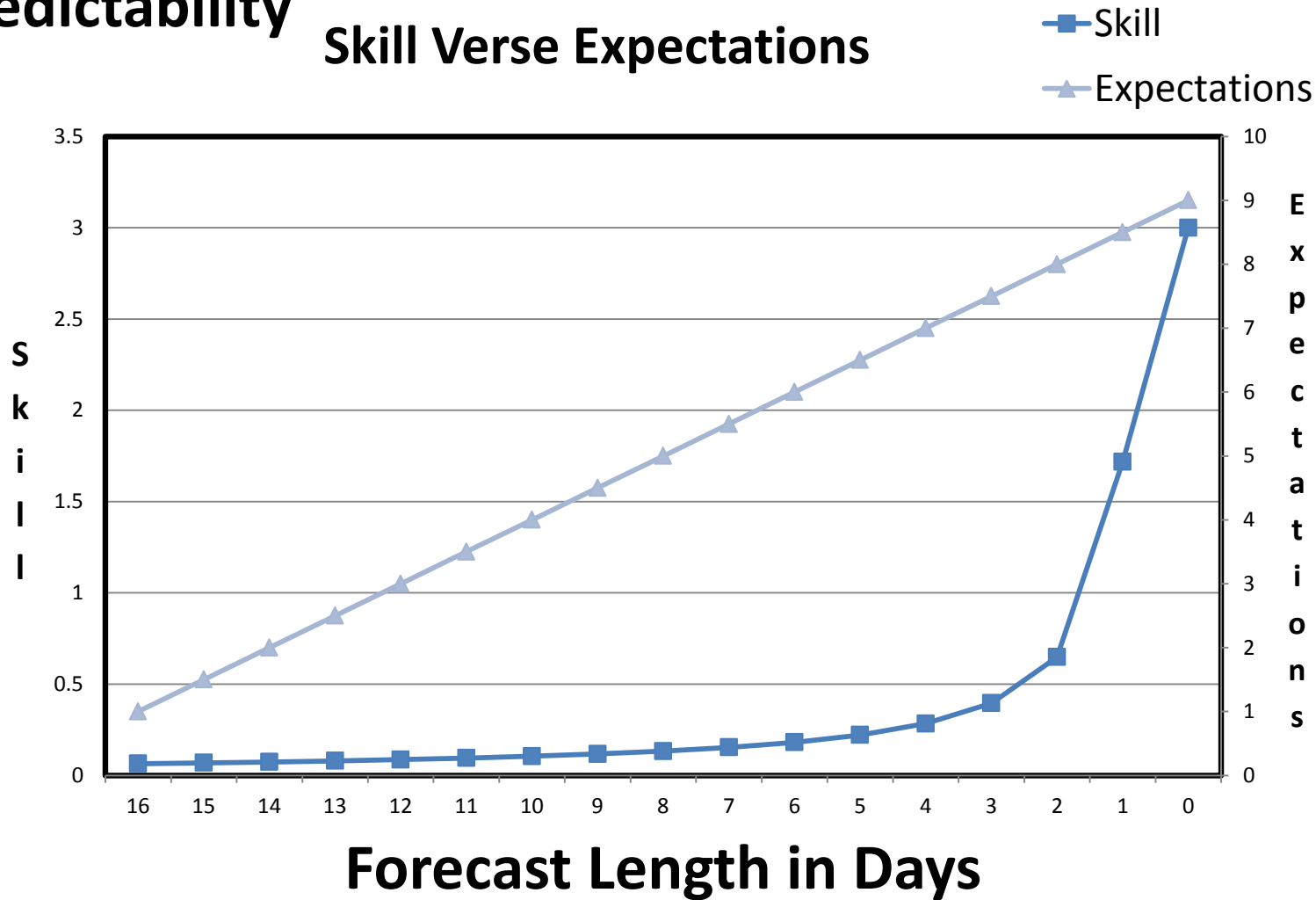
Salt Lake City, Utah

Overview

- How to make good impact-based decisions
 - *Mindful of predictability horizons*
- Lead-times as forecast horizon shortens
 - Predictability should increase as forecast length decreases
 - ***Highest user expectations at shorter ranges***
- Tools of the trade
 - Days 2 – 10 GEFS/EC-EFS/CMCEFC/ NAEFES
 - Single models are a fools-errand
 - Days 1 – 3 Regional Ensembles and blend deterministic models
 - Hours 0 - 15 Short-term high resolution guidance 0-15 hours
 - Hours 0 – 6 blend models and observations
 - We have a lot to learn in the transition from radar/satellite to high resolution models and high resolution models to regional scale ensembles.

Be Mindful of the intrinsic and Practical limits of Predictability

Skill Verse Expectations



Forecast Length and expectations

- **Predictability better at shorter ranges**
 - Generally skill increases as forecast length decreases
 - *More spread in ensembles at longer ranges!*
 - We all know this→
 - Yet hype-casters jump on long range forecasts of big events
- ***Highest user expectations at shorter ranges***
 - Users know basic skill issues→ Predictability horizons
 - They expect more details shorter ranges

Summary

- Making good impact-based decisions
 - *Always be mindful of predictability horizons*
 - *Longer range forecasts **will** change*
- Lead-times as forecast horizon shortens
 - Predictability should increase as forecast length decreases
 - Highest user expectations at shorter ranges
- Using current tools at hand and examples
 - Short-term high resolution guidance 0-15 hours
 - Ensembles 6 to 384 hours
 - Balance “*weather-hype*” from social media